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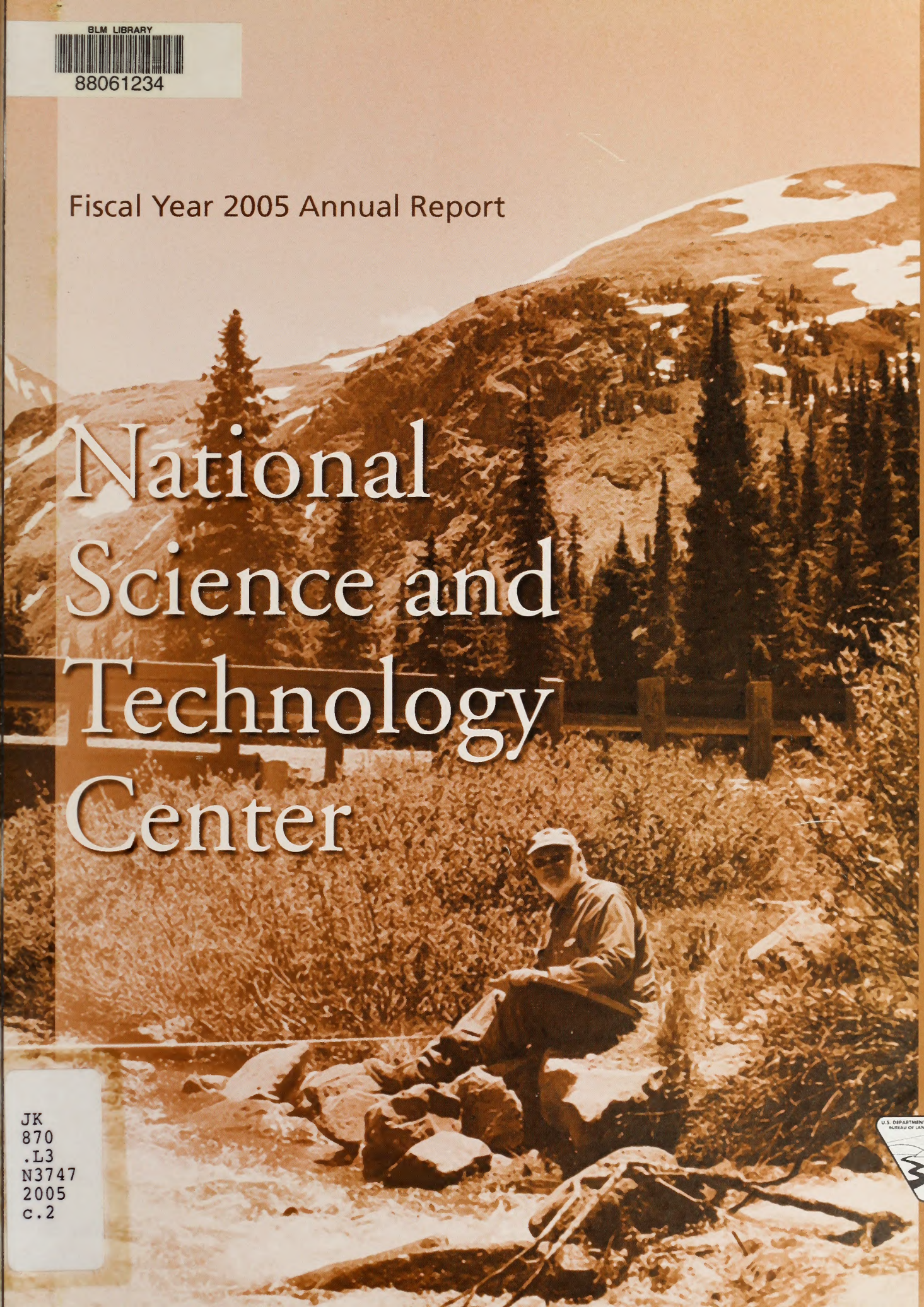
Fiscal Year 2005 Annual Report

National Science and Technology Center



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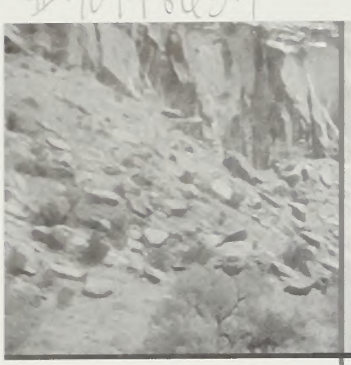

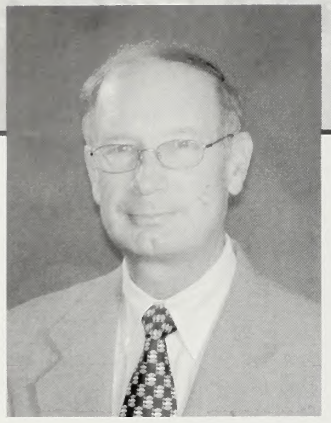

Director's Message

This year, the National Science and Technology Center (NSTC) marked its 10th anniversary. Established as the National Applied Resource Sciences Center on October 1, 1995, our name was changed on October 1, 2000, to better reflect our mission. During the past 10 years, the Center has completed over 3,000 individual projects serving all BLM states and the Washington Office. We are very proud of the work that we have accomplished and take pride in knowing that the work we do helps the requesting office meet its mission.

Our annual report reflects the many ways that NSTC supports both the Bureau of Land Management's (BLM's) science and technology needs and the Department of the Interior's emphasis on science. It provides a sampling of projects that illustrate how we have worked in partnership with others to further the Department's goals of resource protection, resource use, recreation, and serving communities.

As we move into our second decade, we look forward to assisting all offices in meeting whatever technical challenges are presented. Our objective will continue to be to take on the highest priority work in support of the Bureau's mission.

Lee Barkow

Lee Barkow, Center Director

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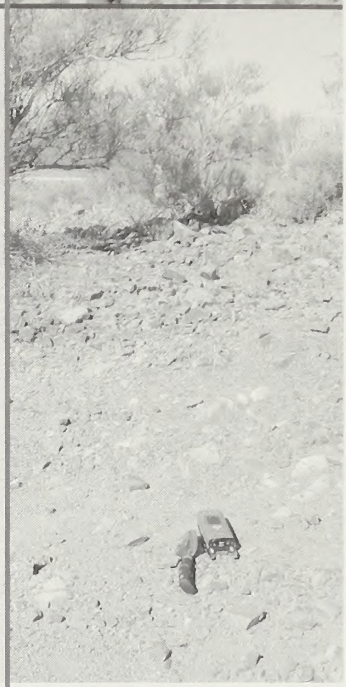
Resource Protection

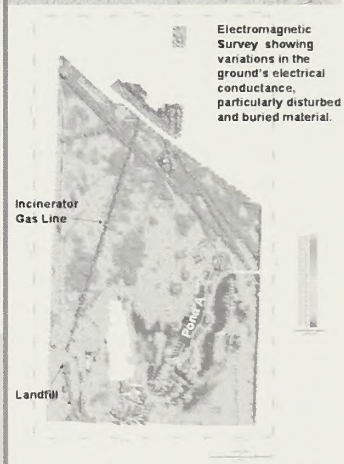


The Department of the Interior cares for thousands of upland, wetland, and aquatic areas, many with special designations such as national monuments and wilderness areas. It also protects thousands of native plant and animal species, including more than 1,200 with special status under the Endangered Species Act. In addition, the Department preserves thousands of Native American archaeological and cultural sites, as well as other objects and properties significant in our nation's history. Many NSTC projects helped protect the Nation's natural, cultural, and heritage resources and supported BLM and the Department in this mission:

- Supported the Alaska Native subsistence program by developing site-specific locational information that will be used to permit commercial mining activities within the Platinum mining site on Alaska's Salmon River. The highly detailed topographic and aerial photography products created will be used to reroute the Salmon River in an effort to recreate a viable fisheries habitat at the site.

- Helped 10 field offices in Idaho, Montana, Wyoming, Utah, and Colorado collect, manage, and analyze data on forest lands for resource management plan revisions and fuels assessment projects.

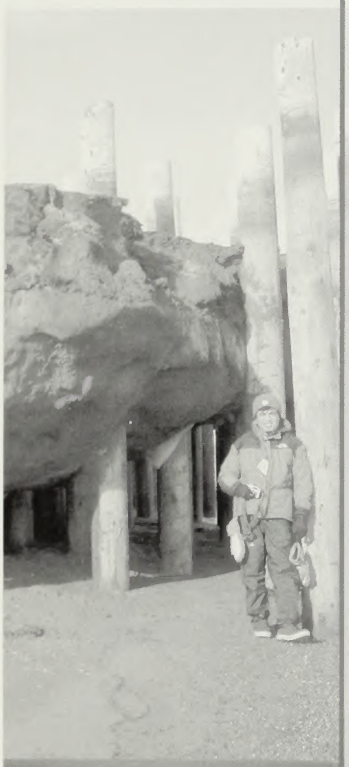
- Provided site characterization, engineering evaluation/cost analysis (EE/CA), risk assessment, clean-up design, technical oversight, and contracting support, at 54 hazardous waste and abandoned mine sites on public lands. These sites, which posed a threat to public safety and the environment, included Poorman-Balm Creek abandoned mine site in Oregon, Saginaw Hill abandoned mine site in Arizona, Topock Compressor Station in California, Pryor Mountain abandoned uranium exploration sites in Montana, Anvil Point abandoned oil shale facility in Colorado, Sunrise Mountain municipal landfill in Nevada, and Excell Helium Plant in Texas.


Electromagnetic Survey showing variations in the ground's electrical conductance, particularly disturbed and buried material.
Incinerator
Gas Line
Pond A
Landfill

Each year, federal funds are used for emergency stabilization and rehabilitation treatments for lands burned by wildfires. In response to concerns by the Government Accountability Office about the success of those treatments and the most effective use of federal funds, NSTC reviewed hundreds of projects and constructed a database containing projects implemented between 2001 and 2003. NSTC then analyzed the data to determine the treatments applied, success rates, and types of monitoring implemented. The database will help promote standardized project submissions and improve the management and utility of treatment and monitoring data, thus resulting in more efficient reporting and, in the long term, substantial fiscal savings.

- Provided digital mapping support for seven Land and Water Conservation Fund projects to be incorporated within a Congressional submission for appropriations funding.

- Completed the redesign, upgrading, and construction of the entire water system at the Desert Tortoise Conservation Center for the Las Vegas Field Office. The new, automated system supplies water to approximately 2,000 desert tortoises currently protected within the Center.



- Provided copies of court cases, laws, Interior Board of Land Appeals decisions, and other legal documents through subscriptions to the WESTLAW and LEXIS-NEXIS legal databases. Copies provided to the National Training Center (NTC) were used to convert a five-volume notebook of paper materials on mining law, which is normally handed out to students in the Mining Claim Validity Examination Procedures course (3800-01), into a space-saving, convenient CD.

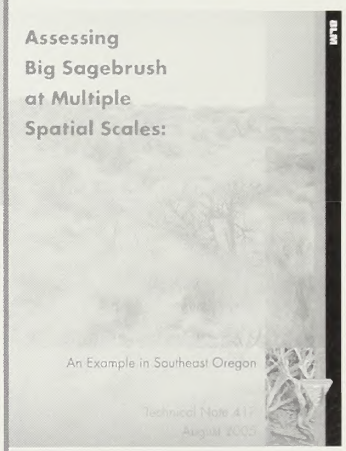
As a result of increased shoreline erosion along the Arctic coast and other areas, there is a significant potential for releases of hazardous substances, pollutants, and contaminants from wastes associated with historic oil operations within the National Petroleum Reserve in Alaska. Releases of waste from these sites pose a substantial threat, particularly to sensitive marine environments. NSTC assisted the Northern Field Office with the inventory and evaluation of these oil operations by completing an expanded preliminary assessment of the J.W. Dalton well site and providing site mapping and characterization for 38 other sites. This work will be essential for preventing future releases from these historic sites.

- Provided support to the National Riparian Service Team, including technical editing and publishing of *Riparian and Wetland Classification Review and Application*, Technical Reference 1737-21, which compares several classification procedures, including the BLM's ecological site approach.

- Completed the design, in collaboration with the Utah State Office, to upgrade the Cleveland-Lloyd Dinosaur Quarry building, construct a major addition to the existing visitor center, and upgrade the aging exhibits. The addition will be respectful of the original structure, which was built in the 1960s.

- Assisted with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) cost recovery and enforcement actions, such as potentially responsible party (PRP) searches, settlement agreements, cost recovery strategies, and coordination with the Department of the Interior Solicitor, for eight hazardous waste and abandoned mine sites, including Topock Compressor Station in California, La Sal Creek abandoned uranium mine in Utah, Saginaw Hill abandoned mine site in Arizona, and Poorman-Balm Creek abandoned mine site in Oregon.

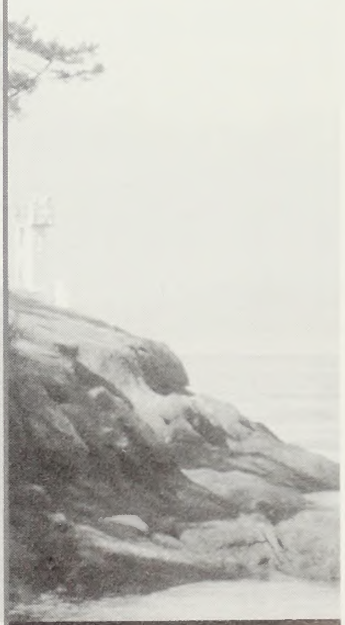
By law, the BLM must manage the wild horses and burros that roam the west as part of the natural system of the public lands; ensure humane care of excess animals through their capture, removal, shipment, and adoption; and transfer titles of adopted animals to individual citizens. The Wild Horse and Burro Information System (WHBIS) is currently used to track these activities; however, the system and the technology supporting it are outdated. In addition, the system does not address all the business processes and requirements of the program and, therefore, users are forced to rely heavily on paper records. NSTC is currently developing a replacement system, the Wild Horse and Burro Program System (WHBPS). The new system will rehost existing functions and add functionality to provide more effective, automated support for all components of the wild horse and burro business processes. WHBPS will be an internal, Web-based application that incorporates the latest technology and is in full alignment with the existing Bureau architecture.

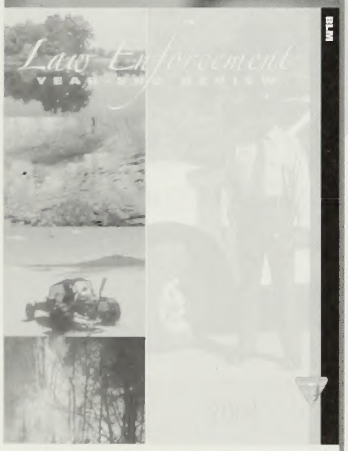


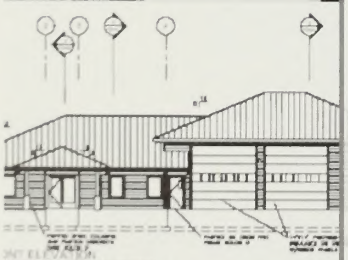
- Completed BLM Technical Note 417, *Assessing Big Sagebrush at Multiple Spatial Scales: An Example in Southeast Oregon*, which documents an assessment process that can be used for developing land use plan objectives and evaluating standards for rangeland health.

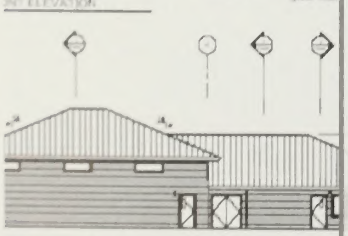
- Continued to assist with natural resource damage assessment and restoration (NRDAR) activities at eight sites where public land resources sustained damage from releases of hazardous substances or oil spills: New Carissa in Oregon, Clark Fork in Montana, Summitville Mine in Colorado, Coeur d'Alene Basin in Idaho, California Gulch/Upper Arkansas in Colorado, Yerington Mine in Nevada, Iron Mountain in California, and Gila River in Arizona. Assistance included scoping site needs, assessing natural resource damages, coordinating with other agencies, representing BLM on natural resource trustee councils, and planning and implementing restoration actions.

- Awarded a phase 1 contract for general cleanup and stabilization of the lightkeeper's quarters at Turn Point Light Station in Washington, prepared a development concept plan for the entire resource area, and, in collaboration with the U.S. Coast Guard, awarded a design/build contract to provide photovoltaic power to the site.







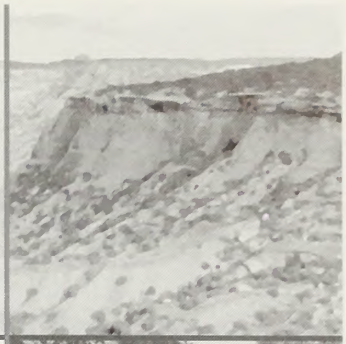


NSTC is developing an approach to describe and report the location and extent of terrestrial habitat connectivity and fragmentation in regional landscapes. This approach is spatially explicit and repeatable, thus allowing for monitoring and reporting of changes in landscape conditions over time. Geographic information system- (GIS-) based technology and information is used to link regional habitat (land cover) data with land use activities, disturbances, and associated management actions. This approach is being applied in a prairie/grassland region analysis, the Green River area/Wyoming basin region sagebrush analysis demonstration, the Owyhee area/northern basin and range region sagebrush analysis demonstration, and the rangewide sagebrush/greater sage-grouse region analysis. The regional habitat connectivity and fragmentation analysis work supports BLM's national strategies for assessment, inventory, and monitoring; sage-grouse conservation; planning (National Environmental Policy Act); and vegetation management.

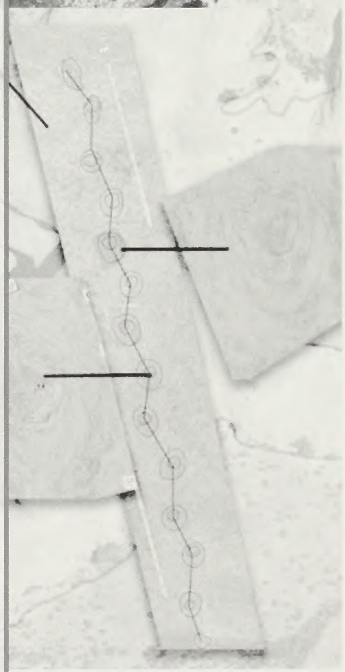
- Researched and developed an online water law course, in cooperation with the National Training Center, that complements state-specific water rights courses by providing a foundation of knowledge upon which those courses can build.

- Designed, edited, and laid out *Law Enforcement Year in Review 2004*, which identifies specific issues and highlights the role of BLM rangers and agents in protecting natural resources and visitors on public lands.

- Designed the Jordan fire station in Montana, one of nearly a dozen facilities to use the standard fire crew quarters design developed 7 years ago. The design continues to be improved and adapted for each specific site.



In 2005, NSTC completed work leading to the revision of the federal reserved water rights claim for the San Pedro Riparian National Conservation Area (NCA). The Arizona-Idaho Conservation Act of 1988, which created the NCA, clearly recognized riparian health as the primary purpose of the reservation and contained strong water rights language for the conservation, protection, and enhancement of this unique riparian ecosystem. Upon the recommendation of the U.S. Department of Justice, the Sierra Vista Field Office and NSTC initiated, conducted, and reviewed several years of studies and data to revise the claim. The revised claim amends the amount of streamflow sought at three San Pedro River stream gauges and one major tributary in the NCA. It also includes claims to ground water use and levels needed to maintain riparian communities, as well as point sources of water for administrative and resource protection purposes.



- Provided a large-area erosion analysis and related map products, using an erosion model interfaced with GIS capabilities, for the Miles City Field Office to help establish the water quality status of Thompson Creek in Montana and for the Ely Field Office to analyze a pilot vegetation restoration project in Nevada. Technology transfer sessions were also provided to help the field offices develop their own erosion modeling capabilities.

- Led the BLM effort to establish protocols for the cyclic inspection of bridges and dams and the reporting and integration of the resulting information into the new Bureauwide Facility Asset Management System database. A diverse array of approaches historically used by each of the states was considered in creating the new guidance.

- Developed and refined a method for using photographs to precisely locate, measure, and document dinosaur tracks and other paleontological resources in the Grand Staircase-Escalante National Monument in Utah. This method allows resource managers to maintain, inventory, and monitor the tracksite and helps interpret this irreplaceable scientific resource for visitors.

- Developed a second-generation automated system to support BLM's forest stewardship contracting authority. The Stewardship Contracting Information Database is Web-based and contains information on 118 projects, covering nearly 89,000 acres and involving approximately $10.5 million in service costs and $4.4 million in product value.

Resource Use

The Department of the Interior has managed the vast resources of America's public lands since it was founded in 1849. Many of the Department's lands produce resources that are critical to the Nation's economic health. The Department must determine where, when, and to what extent renewable and nonrenewable economic resources on public lands should be made available, and balance those needs with resource protection and recreational use. NSTC supported the Bureau and the Department in this mission, helping to manage natural resources to promote responsible use and sustain a dynamic economy:

- Continued populating a database for 1:100,000–scale map production and other GIS purposes. Automated data themes, including the Geographic Coordinate Data Base (GCDB), surface and minerals ownership, wilderness, transportation, hydrography, hypsography, and text labels, are now complete for 47 percent of the western United States.

- Provided technical assistance for implementing process improvements and user requirement specifications, such as page layout and basic editing conventions, for ePlanning, Version 2, which delivers integrated planning information to the public.

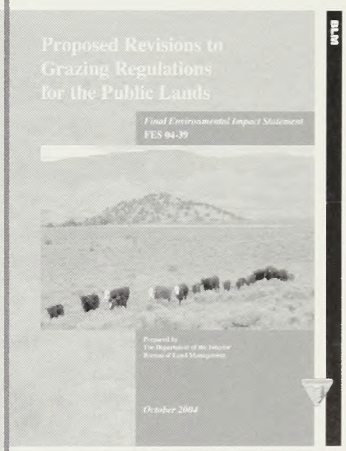
- Acquired and compiled current, accurate, peer-reviewed scientific information into bibliographies to support BLM land use decisions. For example, bibliographies were provided to Oregon on the effects of fire on pinyon juniper woodlands, risk assessment and analysis for natural resources land management, the jumping speed and height of juvenile salmonids, and the ecology of the Mardon skipper.

NSTC played a significant role in assisting the Washington Office with ongoing development of a national monitoring strategy for BLM. This effort is a multiyear approach to improve the efficiency and effectiveness of the Bureau's inventory, monitoring, and assessment activities. The strategy will help BLM refine information gathering at the local level, improve reporting of land health conditions, and identify potential indicators for regional and national reporting. NSTC specialists supported numerous aspects of the initiative, including a local-level monitoring survey, regional-level air quality and habitat connectivity analyses, national-level reporting on land health, and off-highway vehicle- (OHV-) specific land health indicator development.

- Provided technical assistance for air and water quality issues, such as modeling, collection, and interpretation of analytical data; Clean Air and Water Acts compliance; litigation; and contract oversight and provided environmental impact analyses of energy development and realty actions for 19 land use or resource management plans. Sites covered by these plans included Granite Fox Power Project in Nevada, Jack Morrow Hills in Wyoming, and Canyons of the Ancients National Monument in Colorado.

- Organized a legacy visit to Shoshone, Idaho, during which several members of the 1984 resource management planning team met with current staff to review their initial planning decisions, assess implementation efforts over the past 21 years, analyze the lessons learned, and formulate future planning and monitoring strategies.

At the request of the Rangelands, Soil, Water, and Air Staff in Washington, NSTC provided writing, editing, publishing, and technical assistance for the development of the *Proposed Revisions to Grazing Regulations for the Public Lands: Final Environmental Impact Statement FES 04-39*. The final EIS, which will affect the entire grazing industry and influence land management practices throughout the West, was developed using ePlanning. NSTC helped refine the ePlanning system and developed innovative ways to meet the challenges of publishing the final EIS. NSTC assisted with the logical and coherent presentation of technical information, coordinated the analysis of responses to the 18,000 comments received, and prepared the document for printing and electronic dissemination.



- Performed value analysis workshops for two new facilities, the Jordan Fire Station in Montana and Red Rock Canyon Desert Learning Center in Nevada, which yielded over $6.8 million in recommended savings.

- Provided support for the Rangeland Administration System and Rangeland Improvement System to users throughout the BLM.

The Vernal Field Office in Utah is currently consolidating several resource management plans into a single plan and the Glenwood Springs Field Office in Colorado is initiating a land use plan for the Naval Oil Shale Reserve Lands received from the Department of Defense. The focus of both plans is the potential impact from energy development (primarily natural gas). NSTC provided technical support for the combined air quality analysis, including contractor oversight, dispersion modeling, and air quality documentation. The draft environmental impact statements for both areas have been issued, and NSTC is helping both offices respond to air-quality related comments and prepare the final documents, currently scheduled for release in late 2005.

- Revised and printed 79 surface/minerals management maps (1:100,000 scale) in support of multiple resource programs and recreational activities in 10 western states.

- Designed and prepared construction contract documents and assisted during construction of replacement bridges at Strawberry Creek and Red Creek in Wyoming. The bridges had been determined to be unsafe, resulting in road closures.

- Edited and published *Interpreting Indicators of Rangeland Health, Version 4* (Technical Reference 1734-6), which describes a qualitative assessment protocol that allows for more consistent interpretations of rangeland health indicators and more comparable assessment results than in the past.

Recreation

The lands managed by the Department of the Interior include some of the Nation's most popular recreation destinations. These destinations provide for a variety of activities, such as hunting, fishing, hiking, biking, camping, rafting, and wildlife viewing, and they fulfill visitors' desires for adventure, relaxation, and renewal. NSTC's work helped the Bureau and the Department provide recreation opportunities for America:

- Completed the construction of a 130-car parking area, approximately 2,700 linear feet of boardwalk/outdoor classroom/interpretive facilities, and picnic shelters at Red Spring within Red Rock Canyon National Conservation Area in Nevada. The redevelopment included extensive restoration to correct previous impacts to the sensitive environment around Red Spring, which is home to several special status species, including the Spring Mountains springsnail and the mariposa lily.

- Helped write, edit, and design *Visitor Safety on BLM Public Lands*, a brochure to be distributed at all BLM recreation sites to help visitors enjoy the public lands safely.

- Completed the design for the new California National Historic Trails Interpretive Center in Elko, Nevada. Pending favorable bids, construction on the building and interpretive plaza will begin early in 2006, with exhibits following in a future phase as funding allows.

Participation in OHV activities increased by 42 percent between 1999 and 2004, a trend that is expected to continue. This dramatic increase illustrates the need for a monitoring plan at the local and national level so that BLM can provide safe, quality OHV experiences for visitors while still sustaining the health of the public lands. At the request of the Washington Office recreation staff, NSTC is developing recommendations for a monitoring framework that can be integrated into the land health assessment process, and eventually, into BLM's national monitoring strategy. NSTC has briefed Washington and Field Office staffs, drafted a synthesis of previous OHV monitoring efforts, and researched current efforts that can tie in to this project. NSTC is also working with USGS to conduct an in-depth literature review of the effects of OHVs on land health and with Northern Arizona University to study whether the land health assessment process is applicable for determining OHV travel impacts across various ecosystems.

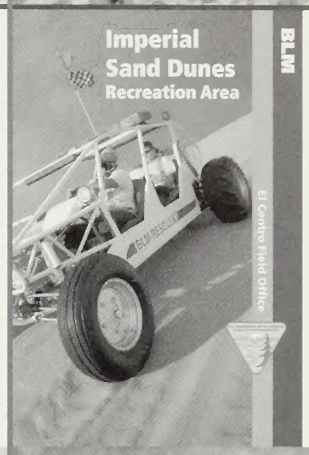
- Designed and assisted the Montrose Field Office in Colorado with the installation of an extreme close-range photogrammetric monitoring protocol to assess potential soil erosion impacts from heavy OHV use.

- Prepared construction contract documents and provided technical assistance during contracting and construction for the second phase of redevelopment at MacKay Reservoir recreation site in Idaho. Campground facilities, a boat ramp, a fish-cleaning station, and related site improvements and support infrastructure are included in the project.

- Created spatial data used to assess the effects of increased recreational activity in the Castle Garden Prehistoric Rock Art Interpretive Area in Wyoming. The data will help the BLM assess past impacts to the land, facilitate future developments, and prevent future negative impacts.

- Prepared design drawings and specifications for interpretive kiosks to be constructed at seven key locations adjacent to the Old Spanish Trail in Nevada. In addition to functional performance and aesthetics, the primary design criteria included durability, vandal resistance, and ease of controlling quality during construction.

Global warming may be causing glacial lakes worldwide to grow, while simultaneously their natural dams (glacial moraines) are weakening as the internal, structurally supportive ice melts. The eventual failure of the moraine to function as a dam often leads to catastrophic glacial lake outburst floods, such as the one that damaged portions of the Klondike Gold Rush National Historic Park northwest of Skagway, Alaska. NSTC assisted the National Park Service in investigating the integrity of the terminal moraine of the Nourse Glacier, which is located in a tributary to the park. NSTC initiated a geophysical survey to detect the existence of an ice core, which would be prone to melting and weakening since the Nourse Lake has more than doubled in size since 1979. The geophysical data indicated that the moraine is instead a well-supported layer of large boulders and gravel residing on solid bedrock and of sufficient size to function as a dam.

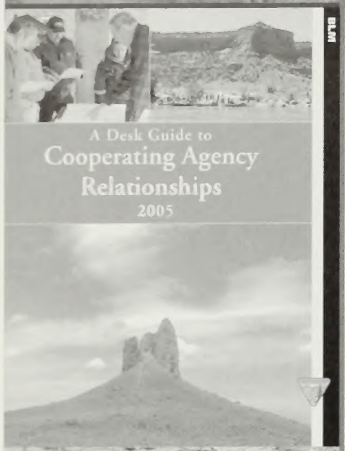


- Designed, edited, and produced *Imperial Sand Dunes Recreation Area*, a brochure that includes a map, an area description, and important safety rules for off-highway vehicle users and other visitors to this California site.

- Assisted with construction contracting and administration for new potable water wells in six separate developed areas and prepared construction contract documents for water storage and distribution in Fairbank Townsite within Las Cienegas and San Pedro Riparian National Conservation Areas in Arizona.

- Provided information to Nevada on disturbances to bighorns from human recreational use of the public lands for an environmental assessment and obtained copies of articles and books for various other policy decisions and assessments, often enabling those assessments to be completed ahead of schedule.

Serving Communities



The Department of the Interior protects lives, resources, and property from wildland fires and illegal activities. To improve decisionmaking and promote understanding of natural processes, the Department also collects, processes, integrates, archives, and provides access to scientific data. In addition, the Department fulfills responsibilities to American Indians, Native Alaskans, and residents of island territories. Many NSTC projects helped BLM and the Department safeguard lives, property, and assets; advance scientific knowledge; and improve the quality of life for communities we serve:

- Published the *Desktop Guide to Cooperating Agency Relationships 2005*, which describes a method for creating more effective governmental partnerships for planning and associated environmental assessments, and the *Bureau of Land Management National Policy for the Federal Advisory Committee Act*, which summarizes what BLM employees need to know when working with alternative dispute resolution-based, collaborative working groups.

- Helped design and instruct training courses related to evaluating and cleaning up abandoned mine lands and hazardous waste sites and conducting natural resource damage assessments. The courses included Hazardous Materials Management—The Basics (NTC course 1703-00), Characterization of Abandoned Mine Lands (NTC course 1703-14), Environmental Site Assessment (NTC course 1703-13), Hazardous Waste Operations and Emergency Response (HAZWOPER) required safety training, and NRDA case strategy development, presented at the Department of the Interior NRDA Restoration Program National Workshop.

- Created digital raster graphic (DRG) images from automated 1:100,000-scale surface management maps for 65 percent of Idaho and 57 percent of Colorado. DRG images can be manipulated and used for GIS purposes, such as for background images for firefighting applications.

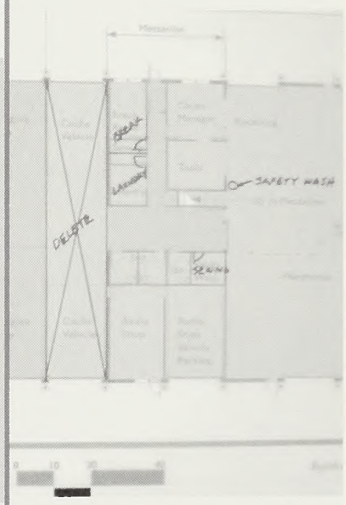
NSTC continues to provide multiple architecture and engineering services, including development, planning, design, and construction management, for projects funded through the Southern Nevada Public Lands Management Act (SNPLMA). The projects, which are to be constructed over the next few years, are some of the most monumental in BLM's history, and their cumulative value is more than $80 million. NSTC managed the architecture and engineering contracts as the contracting officer's representative (COR) and project manager on the larger, more complex projects and served as project manager and designer on many of the smaller projects, including fire facilities and recreation sites.

- Analyzed the risk of accelerated erosion and runoff and the risk of damage to private homes downstream from the Andrews Fire near Carson City, Nevada, using GeoWEPP, a geospatial, process-based erosion prediction model.

- Awarded five contracts, providing the BLM with a $50 million contract capacity for an array of architect and engineering services, including traditional planning, design, value analysis, life cycle costing, energy conservation, and construction management; condition and environmental assessments; business planning and facility maintenance; and compliance audits for environmental, occupational and health, seismic, or accessibility issues.

- Revised the *CERCLA Response Actions Handbook*; managed the national technical assistance contracts for abandoned mine lands, hazardous materials, and physical safety hazards; served on the BLM special cleanup fund team; coordinated the natural resource damage assessment and restoration and air quality programs; served as the BLM representative to five external air and water quality professional organizations; and assisted with the development of the BLM environmental liabilities report for the Washington Office.

Because of conflicting court rulings in the past, ownership of the bed of the Red River and distribution of royalties accruing from oil and gas production in the area are in dispute. NSTC produced photomosaics from historical aerial photography along the Oklahoma/Texas border. The data produced provided "snapshots" of the position and course of the river through time. This data will help the New Mexico State Office's cadastral program determine how changes in the river course affect complex ownership patterns and boundaries between Federal and State interests. The photomosaics may also be used as exhibits in any litigation that may result from this process.



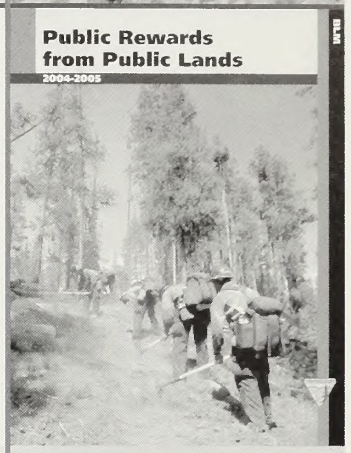
- Performed value analysis studies, completed design development, and prepared construction contract documents for four phases of construction of fire facilities, including crew quarters, a dispatch/administration building, a cache/operations building, and crew-staging facilities, near Moab, Utah.

- Facilitated team efforts to establish a Western Shrub and Grassland Science Information and Management Consortium to advance cooperative conservation of sage grouse and sagebrush/grassland ecosystems through coordination and improved access to science information and expertise. The effort is expected to significantly advance on-the-ground conservation efforts of local working groups and support implementation of the *Bureau of Land Management National Sage-Grouse Habitat Conservation Strategy.*

- Completed the schematic design and began design development for the proposed Red Rock Desert Learning Center and Wild Horse and Burro Facilities, located on the former Oliver Ranch site in Nevada. The project will include a residential science school for Clark County fifth graders, with dormitories, a dining hall, laboratories, an art studio, an observatory, trails, and teaching venues, and facilities to support wild horse and burro gathers and adoption events, including an arena, handling facilities, infirmary, and administrative areas.

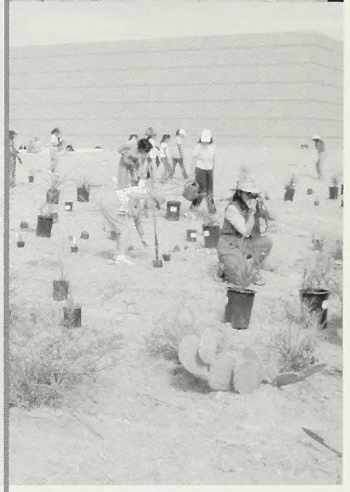
Silver Maple Claims is a wetland and abandoned mine site near Park City, Utah, where many visitors come to hike and bike on the Rail Trail. It is part of a contaminated watershed that has a Total Maximum Daily Load plan under the Clean Water Act. NSTC helped the Salt Lake Field Office characterize the site and prepare a comprehensive removal site inspection (RSI), which is a preliminary CERCLA investigation. The RSI included a tracer injection study by USGS, groundwater modeling, a geophysical study, a macroinvertebrate study by Utah State University, a wetland assessment, and an evaluation of other studies conducted in the watershed. NSTC also assessed natural resources damage and restoration and evaluated ecological risks at the site. The final RSI, which was peer-reviewed by the Environmental Protection Agency, U.S. Fish and Wildlife Service, and U.S. Geological Survey, summarized site risks and recommended removal actions, including the capping of an arsenic and lead hotspot near the Rail Trail, a time-critical action that was subsequently implemented. Additionally, NSTC supported a groundwater investigation and completed a draft cost recovery strategy for the site, which provided options for avoiding future costs to BLM and recovering what BLM has already spent.

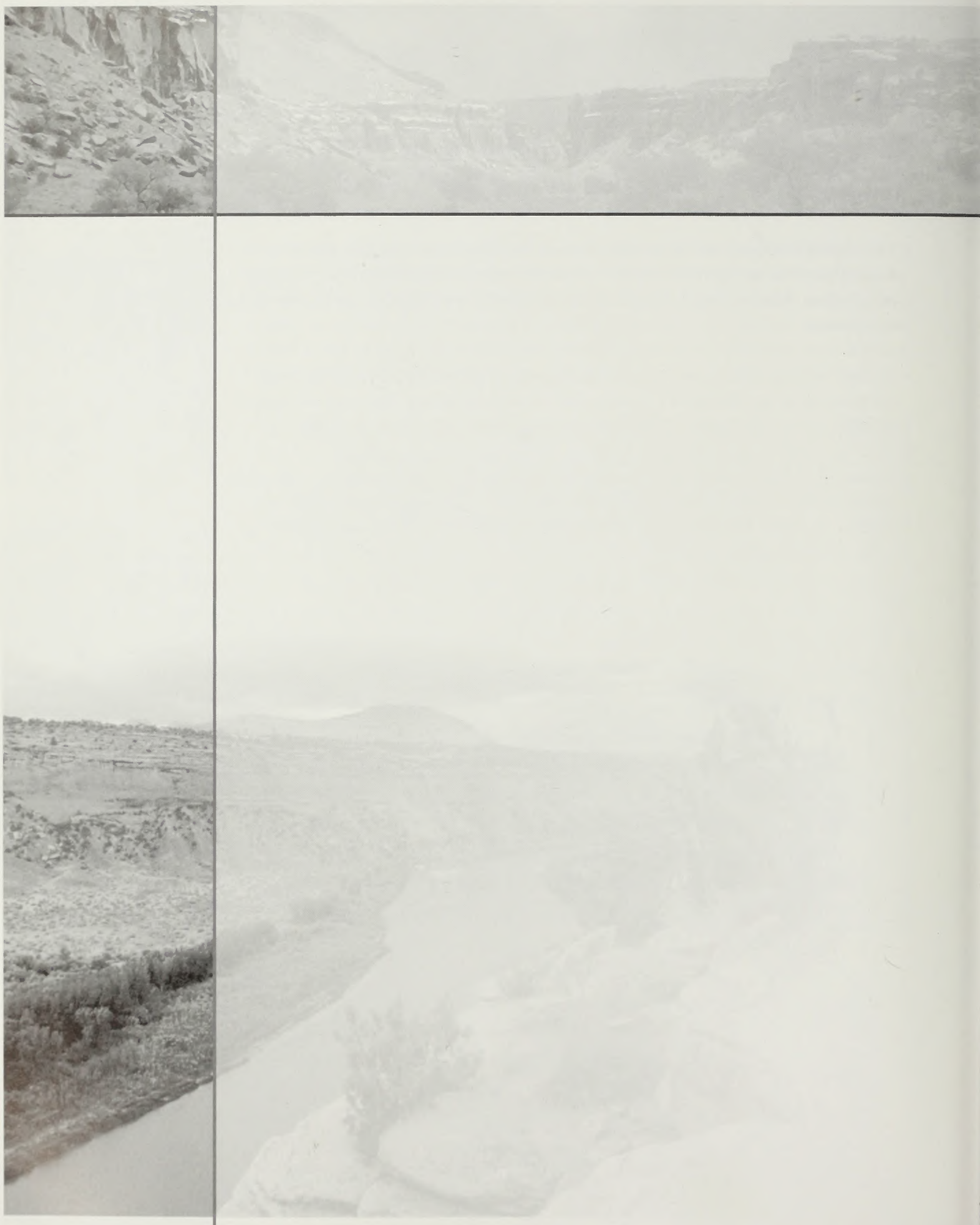
- Edited, revised, designed, and laid out *Public Rewards from Public Lands 2004-2005*, a set of 13 documents that highlight BLM programs and provide State and national statistical information on collections, financial transfers, investments, and commercial and recreational use of public lands and resources.

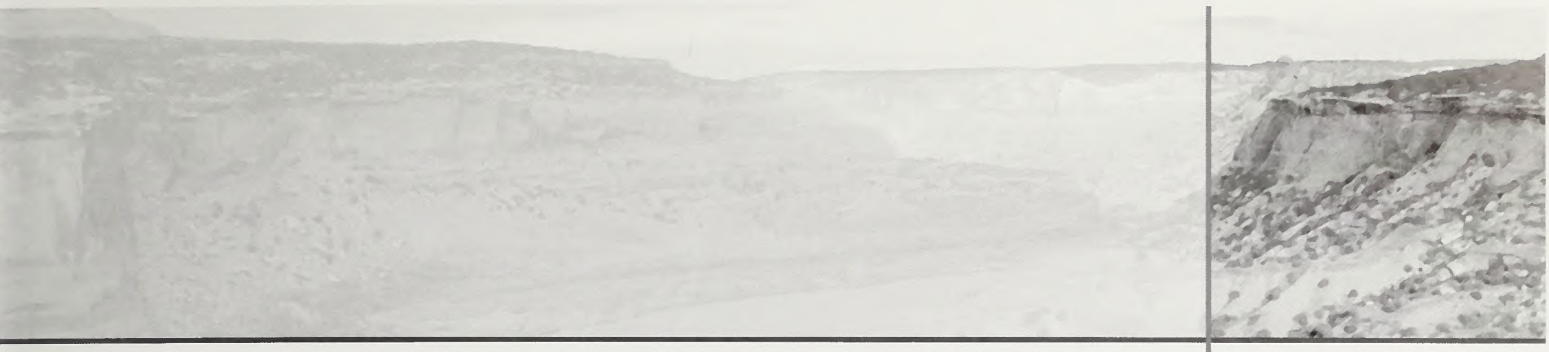


- Provided landscape planning and design, integrating cultural and natural values with aesthetics and functionality, for New Mexico's El Camino Real International Heritage Center and surrounding grounds.

- Served as the product manager for 36 fire and aviation applications requiring national configuration management certification prior to BLM implementation and use and acted as a liaison with the principal interagency stakeholders in streamlining the Bureau's National Test Lab and national configuration management process.







Cover photo: Art Hayes, a natural resource specialist from the Gunnison Field Office (front cover), records data as Den Office (back cover), makes a stream discharge a collection, and data interpretation for th rt in the Henson Creek Basin in Colorado.

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